STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

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GOVERNOR

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August 11, 2009

VIA E-MAIL and U.S. MAIL

Mr. James Hahnenberg
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (SR-J6)
Chicago, Illinois 60604-3590

Dear Mr. Hahnenberg:

SUBJECT: North Bronson Industrial Area Sediment Background Investigation and Soil/Sediment Characterization

During the March 17, 2009, meeting in Bronson, Mr. Leo Brausch, on behalf of his clients, the potentially responsible party (PRP) group for the North Bronson Industrial Area Superfund site (NBIA), addressed several topics relative to the NBIA site and made proposals for proceeding on the project. This letter, prepared in consultation with the United States Environmental Protection Agency (USEPA), addresses the subject of the February 27, 2009, Work Plan for County Drain #30 (CD #30) Sediment and Soil Sampling. These comments are directly sent to you to share with the PRP.

The stated objectives of this work plan are:

- Evaluate background sediment condition within CD #30 upstream of the NBIA site to allow for statistically valid site-specific background sediment concentrations for use in establishing sediment cleanup objectives;
- Evaluate the extent of impacted sediments remaining in CD #30 following the Branch County Drain Commissioner's dredging of CD #30 in 2004;
- Compare current sediment concentrations to historical sediment concentrations; and
- Evaluate constituent concentrations in erodible and non-erodible soils along the northern bank of CD #30, which may have been impacted by the 2004 placement of sediments along the drain's northern bank and right-of-way during CD #30 dredging.

General Comments:

There is no figure depicting where the proposed transects are to be located. A figure clearly depicting the proposed transects should be submitted. The lack of detail in the sampling plan, coupled with the lack of a figure, makes it difficult to ascertain what is being proposed. Please clarify that you are proposing to collect six samples along each

transect as follows: two samples from each of two locations on the Right-of-Way (north side of CD #30, farm field), one sample from the bank side slope, and one sediment sample.

Assuming the above is correct, the limited number of samples proposed will not be sufficient to achieve the stated objectives in the work plan. See the following comments for details.

Sediment Background:

The work plan states that the objective is to develop a "statistically valid" background condition for sediment in CD #30. In order to accomplish this, and in accordance with the *2002 Department of Environmental Quality Sampling Strategies and Statistics Training Materials for Part 201*[1] *Cleanup Criteria*, a minimum of nine sediment samples will have to be collected and analyzed. See below for more specific comments.

It is *not* acceptable to begin background sediment sampling at the approximate location of Remedial Investigation (RI) background sediment sample location SD-12 as stated in the work plan. The July 1993 RI Report states that the sample collected at SD-12 could not be used as background because it had clearly been impacted by site contaminants. Note also that Michigan Department of Environmental Quality (MDEQ) staff has observed that during precipitation events the direction of flow in CD #30 reverses itself and "flows upstream." The phenomenon has no doubt resulted in the transport and deposition of contaminated sediments upstream of points of discharge. The first sample cannot be collected west of RI sediment sample SD-11 the eastern-most sample and the only one deemed representative of background. Subsequent samples should be collected at 500-foot intervals further upstream to the east.

The work plan proposes to collect sediment samples within the 0 to 6-inch depth interval at each sampling station near the center of the active drainage channel. For determination of background in the drain, it is reasonable to sample the biological zone which is typically from 0 to 6 inches. However, the samples should be collected from areas of obvious deposition of sediments, not from a pre-selected location; i.e., from the center of the drain.

Explain what is meant by "in general accordance with" USEPA Standard Operating Procedure (SOP) #2016. Also, include the referenced SOP with the work plan.

The referenced Figure 1 is missing from the work plan and has to be submitted.

Extent of Impacted Sediments Remaining in CD #30:

The second objective of the work plan states that you want to evaluate the extent of impacted sediments remaining in CD #30 following the Branch County Drain

[1]Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Commissioner's dredging of CD #30 in 2004. These objectives will not be achieved with the proposed work plan.

To adequately remediate the contaminated sediments in CD #30, you must characterize the extent of contamination. If characterization was not done prior to excavation, it will have to be done during remediation. The MDEQ and USEPA recommend that the entire depth of the sediment be sampled until the base of the drain is reached. Samples should be collected from 0 to 6 inches, from 6 to 12 inches and then each foot after that if sediments extend deeper than a foot.

If obvious changes in soil are visible (for example, organic-rich layers) these should be separated and analyzed separately. Consistent with procedures described above, samples should be collected from areas of obvious deposition. This method will provide a more accurate estimate of material to be excavated. Failure to properly characterize the sediments prior to excavation would necessitate extensive verification of cleanup sampling during excavation.

CD #30 Bank Sampling:

Agency comments on the proposal for bank sampling are similar to sediment characterization. Your proposed plan does not provide sufficient data to accurately estimate the volume of soil to be excavated.

It is nearly certain that bank soil one foot above the water table will show contamination as erosion has occurred, and contaminants carried by groundwater have been discharging for decades. During periods of high precipitation and/or snow melt, the water level of the drain increases dramatically, potentially depositing contaminants all of the way to the top of the drain. Several samples collected along transects along the vertical face of the bank will provide a more complete data set necessary to achieve stated objectives. Samples should also be taken horizontally into the bank to fully determine the extent of contamination. Verification sampling will be required following excavation. A more complete pre-cleanup characterization of site conditions will likely reduce the number of confirmatory samples following excavation.

Finally, please discuss soil on the south side of the drain. Is the intent to remove all of the material between the lagoons and the drain?

CD #30 Right-of-Way Sampling:

Please clarify the sampling proposal by addressing the following:

County Drain #30 sediments have been dredged multiple times and the dredged material has been spread as far north of the drain as 75 to 100 feet. The lack of a figure showing where the two samples are proposed notwithstanding, it doesn't appear that the deposited material can be adequately characterized with so few samples. Additional characterization is necessary to determine the volume of material that must

be removed. To minimize analytical costs, we suggest you consider using an X-ray Fluorescence monitor (XRF) to screen samples. Selected samples can be submitted for laboratory analysis to confirm the accuracy of the screened samples.

The work plan states that samples will not be collected deeper than 18 inches in depth. The remediation of NBIA contaminants on the north side of the drain must achieve protection of residential drinking water criteria unless potential exposure is addressed via some other mechanism. In order to demonstrate this, samples should be collected and, at a minimum, screened with XRF until the extent of contamination above protection of residential drinking water criteria is identified. If discernible, sampling into native material is preferable.

No leaching test is proposed. An alternative to excavating all soil to the protection of residential drinking water criteria would be a demonstration, via a leaching test, that the contaminated soil is not going to leach contaminants at high enough concentrations to contaminate the groundwater above generic residential drinking water criteria. If the PRP group would like to pursue this option, a written proposal can be submitted for MDEQ/USEPA review.

To summarize, please do the following.

- Submit figures, modified in accordance with the comments above;
- Submit a revised, more comprehensive work plan responsive to the comments, incorporating recommended changes above;
- Increase the scope of the proposal, or provide acceptable justification for why it is not required; and
- Modify objectives of your proposal to match the comprehensiveness of your sampling proposal and ensure there will be sufficient data to achieve the stated objectives.

Please contact Mr. Charles Graff at 517-335-2596 if you have questions or would like to discuss any portion of this letter.

Sincerely,

Dana W. Devantier

for Deborah Larsen
Project Manager
Specialized Sampling Unit
Superfund Section
Remediation and Redevelopment Division

cc: Mr. Leo Brausch, P.E.
Mr. Charles Graff, MDEQ
NBIA File